

**Notice of Allowability**

Application No.

10/016,132

Examiner

Basia Ridley

Applicant(s)

RUSTA-SALLEHY ET AL.

Art Unit

1764

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 17 February 2005.
2. ☒ The allowed claim(s) is/are 1,3-5,7,8,11-13,28,30,32 and 33.
3. ☒ The drawings filed on 13 August 2004 and 17 February 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Samuel Frost on 17 March 2005.

The application has been amended as follows:

**In the Claims:**

Claim 11 line 1, deleted "claim7," and inserted--claim 7,--;

Claim 12 line 1, deleted "(currently amended)" and inserted --(previously presented)-- and deleted "claim11," and inserted --claim 11,--.

**In the Specification:**

page 13 line 2, deleted "a solution supply means-- and inserted --coolant supply means--;

abstract deleted the abstract in its entirety and substituted the following abstract:

--A system and reactor stack for generating hydrogen from a hydride solution in presence of a catalyst. The reactor stack includes a number of reactor plates and separator plates alternate with one another, to define reaction chambers alternating with coolant chambers. Each reactor plate has a first face defining a solution flow field and an opposing second face defining a coolant flow field. Each solution flow field comprises a common reaction chamber and a plurality of channels opening into the common reaction chamber. The catalyst is provided in the common reaction chamber.

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Each reaction chamber is configured to receive the hydride solution and to bring at least a portion of the hydride solution in contact with the catalyst. Each reaction chamber is in fluid communication with an adjacent reaction chamber and each coolant chamber is in fluid communication with an adjacent coolant chamber.--

2. The drawings were received on 17 February 2005. These drawings are acceptable.
3. The following is an examiner's statement of reasons for allowance:

The claim combination wherein the reactor vessel comprises a plurality of reactor plates and a plurality of separator plates alternate with the reactor plates, each reactor plate having a first face and a second face in opposing relation with the first face, wherein the first face defines a solution flow field and the second face defines a coolant flow field, wherein each solution flow field comprises a common reaction chamber and a plurality of channels opening into the common reaction chamber, wherein a rim is provided around and partially defining the reaction chamber and wherein the catalyst is provided in the reaction chamber, is allowable over the prior art of record.

While reactor vessels comprising a plurality of reactor plates and a plurality of separator plates alternate with the reactor plates, each reactor plate having a first face and a second face in opposing relation with the first face, wherein the first face defines a solution flow field and the second face defines a coolant flow field are known in the art, as evidenced by Lippert et al., said known reactor vessels are different from the instant reactor vessel because in the known reactor vessels the catalyst is provided in said plurality of channels and not in the common reaction chamber into which said plurality of channels opens. Further, the prior art does not provide motivation to add said common reaction chamber containing catalysts to the reactor vessels of the prior art.

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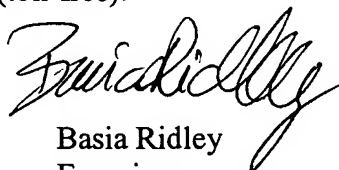
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Basia Ridley  
Examiner  
Art Unit 1764

BR

March 17, 2005